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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,037	02/08/2002	Brent E. Logan	4527-103.1 US	3613

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EXAMINER	
HARRIS, CHANDA L	

ART UNIT	PAPER NUMBER
3714	

DATE MAILED: 11/25/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Applicati n No.	Applicant(s)	
	10/071,037	LOGAN, BRENT E.	
	Examin r	Art Unit	
	Chanda L. Harris	3714	

-- The MAILING DATE of this communication appears on the cover sheet with th correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12,14,15,17,19,20 and 33-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12,14,15,17,19,20 and 33-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Status of Claims

In response to the Amendment filed on 9/15/03, Claims 12, 14-15,17,19,20 and 33-40 are pending.

Claim Objections

Claim 34 is objected to because of the following informalities: It is dependent on cancelled Claim 32. Examiner is treating Claim 34 as if it were dependent on Claim 33. Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 12,14-15,17,19-20, and 36-40 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

(1) whether the invention is within the technological arts; and

(2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory

subject matter. For a claim to pass muster, the recited limitations must somehow apply, involve, use, or advance the technological arts.

In the present case, Claims 12,14-15,17,19-20, and 36-40 are within the technological arts because they involve the transmission of a sequence of tones in soundwave form which is effected by technology.

Additionally, for a claimed invention to be statutory, the claimed invention must produce a useful, concrete, and tangible result. *See, e.g., State Street Bank and Trust Co. v. Signature Financial Group Inc., 149 F.3d at 1373, 47 USPQ2d at 1601-02 (Fed. Cir. 1998).* In the present case, the claims do not produce a useful, concrete, and tangible result. The claims recite "thereby adjusting cognitive function of the postnatal human" (Claims 12 and 36), "thereby improving the cognitive function of the premature baby" (Claims 17 and 37). One of ordinary skill in the art would not be able to arrive at a specific, concrete (i.e. repeatable) result to any of the claimed effects without undue experimentation. It is not guaranteed that the cited processes and means are going to adjust or improve the cognitive function of every postnatal human or premature baby. See also the examiner's undue experimentation analysis in the rejection set forth below under 35 U.S.C. 112 1st paragraph.

Although the recited invention is of the technological arts, it is deemed to be directed to non-statutory subject matter because it does not produce a useful, concrete, and tangible result. Therefore the invention in Claims 12,14-15,17,19-20, and 36-40 is not eligible for patent protection.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 12,14-15,17,19-20, and 36-40 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, it does not appear as if the invention could be practiced to produce a concrete result without undue experimentation. The factors set forth for a determination of undue experimentation are set forth in MPEP 2164.01(a), following the analysis in *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988). The evidence in the application file has been considered for each of these factors as a whole and all of the factual considerations have been weighed. Specifically, the intended operation of the invention is to improve or adjust cognitive function. The factors used in the invention are extremely unsupported and unproven with any result of implementing the invention being likely. Applicant discloses in the specification:

> Developmentally, it has been suggested that an alpha rhythm can be both a significant empirical indicator and predictor of reduced or amplified mental capacity. A child whose alpha rhythm is advanced beyond the norm may therefore have attained a more mature level of cognitive function than someone of similar age having a lower alpha rhythm. (Page 2)

> It has been found that a progressive pattern of sonic variations reproducing incrementally faster alpha rhythms at levels and formats appropriate to the prenatal stage which is repeatedly transmitted to the fetal child is advantageous in increasing cognitive function. (Page 2)

It has been found that application of the above described methods results in a higher alpha rhythm for the infant stimulated with system 10 than the alpha rhythm measure in infants not stimulated with system 10. (Page 6)

Also, other progressive patterns of sonic variations having different increasing frequencies or tonal variations could be used to increase cognitive function in accordance with the teachings of the present invention. (Page 7)

Duration of the effect is dependent upon length of application, user psychodynamics, and subsequent environmental factors. (Page 7)

Applicant has not set forth any objective evidence or direction in the record that would lead one of ordinary skill in the art to analyze these highly unsupported factors and arrive at a specific, predictable result for every postnatal human and for every premature baby. The very low predictability of this invention due to the unsupported and unproven nature of the elements used therein, coupled with the lack of direction provided by the specification far outweigh all other *Wands* factors when considering the necessity for undue experimentation.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 33-35 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over at least Claims 1, 12-13, and 24 of U.S. Patent No. 6,494,719 ('719) in view of Jaillet (US 6,443,977).

[Claim 33-35]: The differences between Claims 33-35 and at least Claims 1, 12-13, and 24 of the patent is wherein said tones in said pattern of sonic variations (i.e. audio signals) are an alpha rhythm baseline tone in which subsequent sequences increase or decrease in tempo. However, Jaillet teaches varying tone, volume and the type of auditory signal. See Col.10: 44-46. Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate the aforementioned limitation into the method and system of '719, in light of the teaching of Jaillet, in order to achieve the desired effect.

Citation of Pertinent Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Yasushi (US 5,495,853)

  -alpha rhythms

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection. See rejection above. Therefore, this action is made NON-FINAL.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chanda L. Harris whose telephone number is 703-308-8358. The examiner can normally be reached on M-F 6:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Hughes can be reached on 703-308-1806. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

Chanda L. Harris
Examiner
Art Unit 3714

ch.